

REMARKS

The Examiner is thanked for the thorough examination and search of the subject patent application.

Claims 44, 48, 49 and 60 are pending; Claims 44, 48, 49 and 60 have been currently amended; Claims 1-43, 45-47 and 50-59 have been canceled. It is believed that no new matter is added.

Response to Claim Election

Applicant elected Species 4: Fig. 37 on Mar. 1, 2007 for further examination.

The currently amended claims 44, 48, 49 and 53-60 are supported in Fig. 37 and specification. Not under being limited to the scope of the invention, reference numbers are marked for interpretation, as follows:

Claims 1-43 (canceled)

44. A circuit component comprising:

a substrate **910**;

a semiconductor chip **900** having a front surface **902A** and a back surface **902B**, wherein said front surface **902A** comprises multiple pads **904**, wherein said front surface **902A** is on the bottom of said semiconductor chip **900**, and wherein said back surface **902B** of said semiconductor chip **900** is on the top of said semiconductor chip **900**;

a machine readable information **IM** directly on said back surface **902B** of said semiconductor chip **900**, wherein said machine readable information **IM** is an identity of product and manufacturer or said machine readable information **IM** is a bar code;

multiple metal bumps **906** directly on said multiple pads **904** of said semiconductor chip **900**, wherein said multiple metal bumps **906** attach said semiconductor chip **900** to a top surface of said substrate **910**; and

an optically transparent layer **918** directly over said back surface **902B**, wherein said optically transparent layer **918** covers said identity of product and manufacturer or said bar code **IM**, wherein said identity of product and manufacturer or said bar code **IM** is visible and machine readable through said optically transparent layer **918**.

Claims 45-47 (canceled)

48. The circuit component of claim 44 further comprising an underfill **916** between said front surface **902A** and said top surface of said substrate **910**, wherein said underfill **916** encloses said multiple metal bumps **906**.

49. The circuit component of claim 44 further comprising multiple balls **912B** on a bottom surface of said substrate **910**.

Claims 50-59 (canceled)

60. The circuit component of claim 44, wherein said multiple metal bumps **906** comprise solder.

~ See FIG. 37, the sixth paragraph under the section of “SUMMARY OF THE INVENTION” on page 3 and the second paragraph on page 36 ~

It is believed that all subject matters in Claims 44, 48, 49 and 60 are supported in the originally-submitted figures and specification.

Claim Arguments against JP62-169448

Applicants respectfully assert that the circuit component currently claimed in Claim 44 patentably distinguishes over the citations by Hiromasa et al. (JP62-169448).

Hiromasa et al. teach some letters covered with a transparent resin 4 is impressed on a package 2, but is not directly on a semiconductor chip 7. ~ See Figs. 1 and 2 and Abstract ~ However, an information on the semiconductor chip 7 is not believed to be visible because Hiromasa et al. fail to teach the package 2 is transparent. Note that in Fig. 2, the semiconductor chip 7 is covered with the package material 2. The recessed portion 3 is over the chip, but not directly on the chip. The transparent resin 4 is over the recessed portion 3 of the package 2, but the package 2 itself is not transparent.

Hiromasa et al. fail to teach that a machine readable information directly on a back surface of a semiconductor chip can be covered with an optically transparent layer, as currently claimed in Claim 44. The machine readable information on the semiconductor chip, in the claimed circuit component, is visible through the optically transparent layer, which is not taught by Hiromasa et al. The optically transparent layer may protect the identity of product and manufacturer or the bar code, directly on the semiconductor chip, from being damaged and provide the capability to read the identity of product and manufacturer or the bar code directly on the semiconductor chip, which is not taught by Hiromasa et al.

Even though another identity of product and manufacturer or another bar code is not impressed on the claimed circuit component, one can identify the claimed circuit component by reading the identity of product and manufacturer or the bar code directly on the semiconductor chip through the optically transparent layer. It is believed that Hiromasa et al.'s device can not attain the above-mentioned function.

Furthermore, Hiromasa et al. fail to teach there may be multiple metal bumps attaching a semiconductor chip to a substrate, as currently claimed in Claim 44.

For at least the foregoing reasons, applicants respectfully submit independent Claim 44 patently distinguishes over the prior art references, and should be allowed. For at least the same reasons, dependent Claims 48, 49 and 60 patently define over the prior art as well.

CONCLUSION

All of the pending claims are believed to be in condition for allowance. Accordingly, allowance of the claims and the application as a whole are respectfully requested.

It is requested that should Examiner Walsh not find that the Claims are now Allowable that he call the undersigned at 845 452-5863 to overcome any problems preventing allowance.

Respectfully submitted,



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